2020 Updated CDC Gonorrhea Treatment Guidelines: Frequently Asked Questions

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Disclosures

None

Sure feels like there are a lot of changes for me in the upcoming 2021 CDC STI Guidelines!

Chlamydia

Hold my beer…

Gonorrhea

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POLLING QUESTION:

Have you started treating for gonorrhea (GC) according to the updated December 2020 GC treatment guidelines?

- Yes
- No
- I didn’t know there were updated guidelines
- I need coffee

For more detailed information:

- Excellent talk by Lindley Barbee January 28, 2021
- Available at the UW STD PTC website
  - https://www.uwptc.org/jan-2021-course-recording
  - Password: UWPTCJAN21 (you have to enter it in 2 different locations)

- CDC 2021 Treatment Guidelines webinar
  - Video: https://www.youtube.com/watch?v=azXn_Bv_R7Y
  - Transcript: https://npin.cdc.gov/sites/default/files/CDC_STI_Transcript_FINAL_0114.pdf
  - Q+A: https://www.cdc.gov/std/treatment-guidelines/qa.htm

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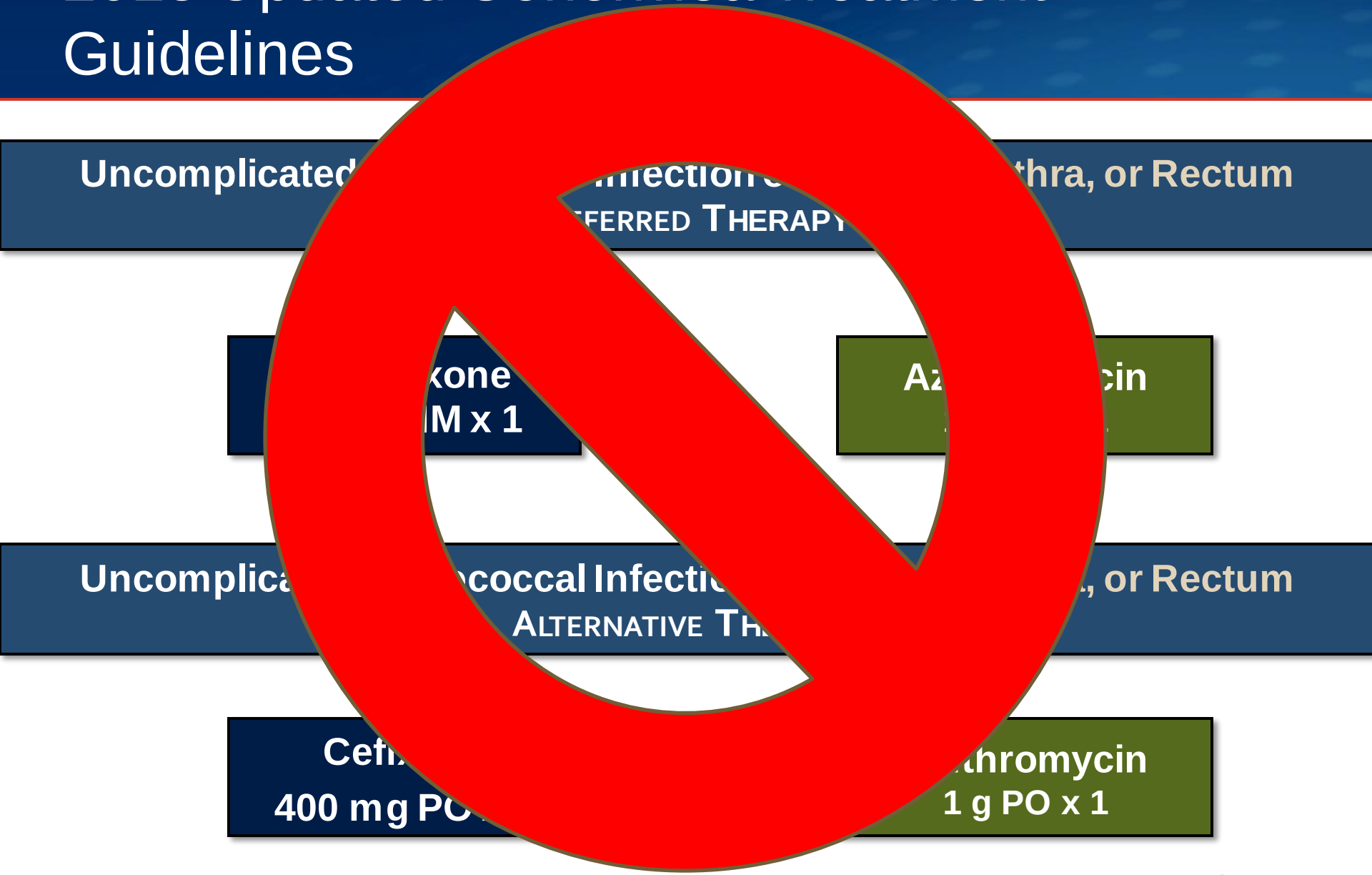
POLLING QUESTION

You get a call from the lab telling you that the patient you tested for STIs yesterday has a positive gonorrhea NAAT. Before deciding on treatment, what do you need to know?

1. Site of infection
2. Patient's weight
3. Drug allergy history
4. Chlamydia test result
5. All of the above

2015 Updated Gonorrhea Treatment Guidelines



Source: CDC and Prevention. MMWR. 2015.64(3).

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2015 Updated Gonorrhea Treatment Guidelines

Uncor	ococcal	arynx
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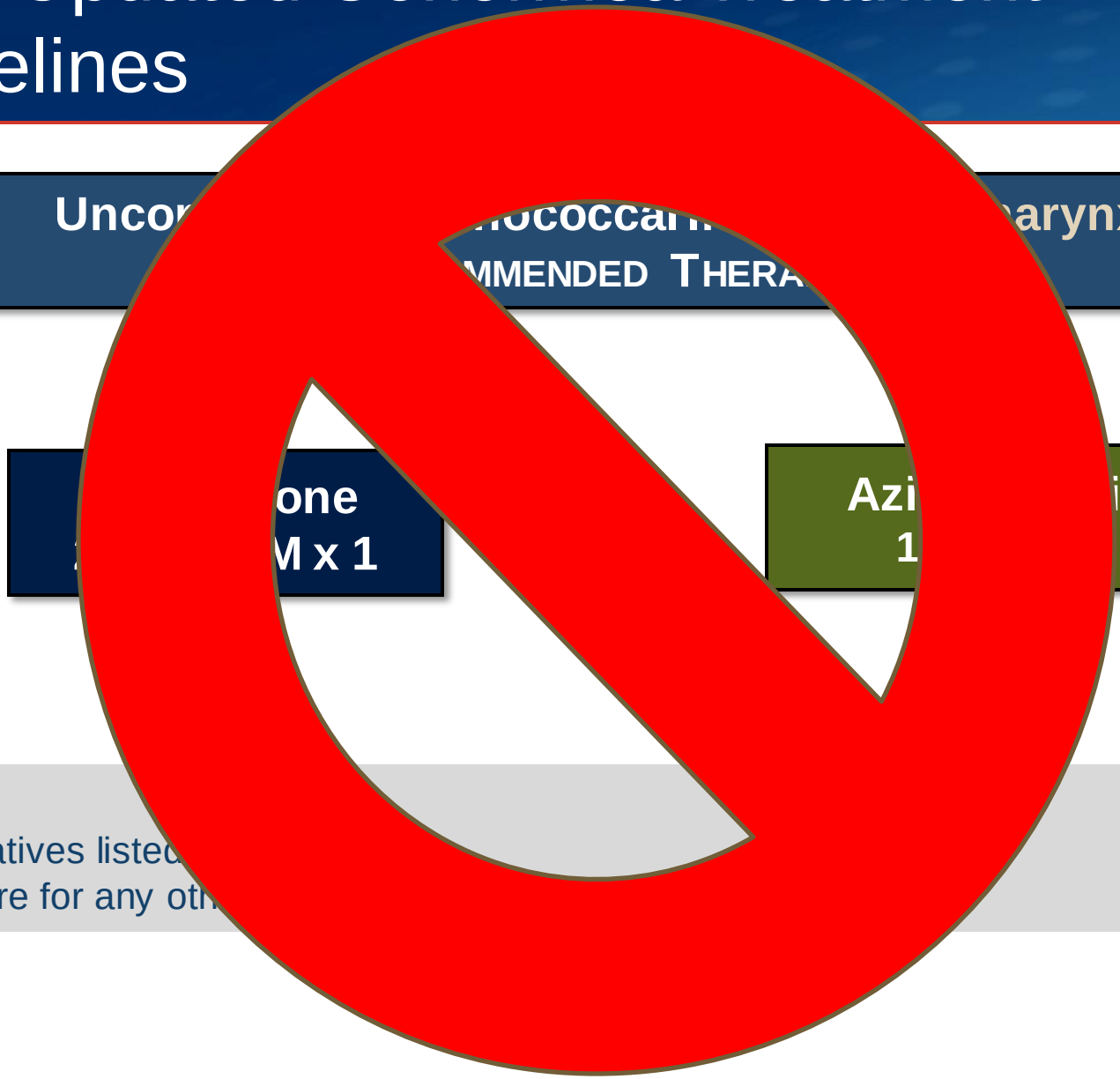

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NOTES:

- No alternatives listed
- Test of cure for any oth

Source: CDC and Prevention. MMWR. 2015.64(3).

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Morbidity and Mortality Weekly Report

Update to CDC's Treatment Guidelines for Gonococcal Infection, 2020

Sancta St. Cyr, MD[1]; Lindley Barbee, MD[1,2]; Kimberly A. Workowski, MD[1,3]; Laura H. Bachmann, MD[1]; Cau Pham, PhD[1]; Karen Schlanger, PhD[1]; Elizabeth Torrone, PhD[1]; Hillard Weinstock, MD[1]; Ellen N. Kersh, PhD[1]; Phoebe Thorpe, MD[1]

BOX. CDC recommended regimens for uncomplicated gonococcal infections, 2020

Regimen for uncomplicated gonococcal infections of the cervix, urethra, or rectum:

Ceftriaxone 500 mg IM as a single dose for persons weighing <150 kg (300 lb).

- For persons weighing ≥150 kg (300 lb), 1 g of IM ceftriaxone should be administered.
- If chlamydial infection has not been excluded, providers should treat for chlamydia with doxycycline 100 mg orally twice daily for 7 days. During pregnancy, azithromycin 1 g as a single dose is recommended to treat chlamydia.

Major Changes:

1) Remove co-administration of azithromycin

2) Increase ceftriaxone dose 250mg → 500mg IM

3) This is the only regimen recommended for pharyngeal infection

Issued December 18, 2020
https://www.cdc.gov/mmwr/volumes/69/wr/mm6950a6.htm

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Other Significant Changes

- Test of cure recommended for pharyngeal GC
  - Regardless of treatment regimen
  - At 7-14 days
  - With NAAT or culture (CDC says both if possible!)

  - Downsides
    - Risk of false positives
    - Cost
    - Additional visit
    - Swab shortages

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This is the first I am hearing about this. I just treated a patient for rectal gonorrhea with ceftriaxone 250 mg IM a couple days ago. Do I need to call them back in?

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POLLING QUESTION:

What would you do for a patient who was treated 3 days ago for rectal gonorrhea with ceftriaxone 250 mg IM?

1. Bring back in for another dose of ceftriaxone 250 mg IM
2. Bring back in for a dose of ceftriaxone 500 mg IM
3. No additional treatment, do a test of cure at 2 weeks
4. No additional treatment, routine rescreening at 3 months

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Management of patients treated for GC with ceftriaxone 250 mg IM

- Don’t panic!
- Assess patient weight
  - Consider giving additional 250 mg IM or 500 mg IM if significantly overweight or obese
- Assess site of infection
  - If pharyngeal, may be more likely to give additional treatment
- Most cases would just rescreen at 3 months or earlier

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Why does the CDC say 300lbs when 150kg is 330lbs?

Quick answer!

- Typo: was supposed to say ~300 lbs
- Easier to remember nice round numbers, so fine to use 1 gm for patients weighing 300 lbs or more

My clinic doesn't stock ceftriaxone and my patient is terrified of needles anyway. What are my options?

Morbidity and Mortality Weekly Report

Update to CDC's Treatment Guidelines for Gonococcal Infection, 2020

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Alternative regimens for uncomplicated gonococcal infections of the cervix, urethra, or rectum if ceftriaxone is not available:

Gentamicin 240 mg IM as a single dose plus azithromycin 2 g orally as a single dose OR

Cefixime 800 mg orally as a single dose. If treating with cefixime, and chlamydial infection has not been excluded, providers should treat for chlamydia with doxycycline 100 mg orally twice daily for 7 days. During pregnancy, azithromycin 1 g as a single dose is recommended to treat chlamydia.

Changes:

1) Gentamicin & azithromycin no longer recommended for pharyngeal GC
2) Cefixime dose increased

Issued December 18, 2020
https://www.cdc.gov/mmwr/volumes/69/wr/mm6950a6.htm

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Gentamicin no longer recommended as an alternative for pharyngeal gonorrhea

Clinical Infectious Diseases

MAJOR ARTICLE

Gentamicin Alone Is Inadequate to Eradicate *Neisseria Gonorrhoeae* From the Pharynx

Lindley A. Barbee,[1,2] Olusegun O. Soge,[3] Jennifer Morgan,[2] Angela LeClair,[1] Tamara Bass,[2] Brian J. Werth,[4] James P. Hughes,[5] and Matthew R. Golden[1,2,6]

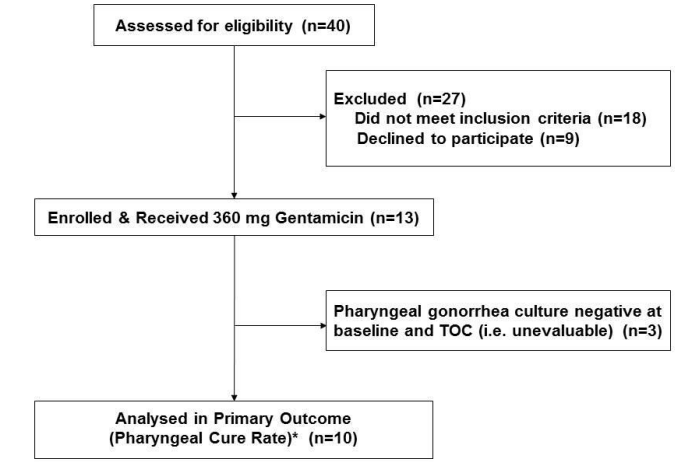
[1]Division of Allergy and Infectious Diseases, Department of Medicine, University of Washington, Seattle, Washington, USA, [2]Human Immunodeficiency Virus/Sexually Transmitted Disease Program, Public Health–Seattle & King County, Seattle, Washington, USA, [3]Department of Global Health, University of Washington, Seattle, Washington, USA, [4]Department of Pharmacy, University of Washington, Seattle, Washington, USA, [5]Department of Biostatistics, University of Washington, Seattle, Washington, USA, and [6]Department of Epidemiology, University of Washington, Seattle, Washington, USA

Table 3. Analysis of Pharmacokinetic/Pharmacodynamic Predictors of Cure of Pharyngeal Gonorrhea With 360 mg Intramuscular Gentamicin

Predictor	Cure (n = 2)	Failure (n = 8)	*P* Value
Gentamicin MIC, μg/mL, median	8	8	.486
Gentamicin C_{max}, μg/mL, mean	18.9	22.5	.470
Gentamicin weight-based dosing, mg/kg, mean	4.26	4.80	.596
C_{max}/MIC ratio, mean	2.36	3.71	.345
C_{max}/MIC ratio, geometric mean	0.851	1.23	.280

Abbreviations: C_{max}, peak serum concentration; MIC, minimum inhibitory concentration.

Fig 1: Flow Diagram



Only 2 of 10 evaluable subjects cured at throat

20% Cure (95% CI: 2.5% - 55.6%)

Barbee LA et al. CID. 2020 Nov 5;71(8):1877-1882.

My patient with pharyngeal GC was treated with ceftriaxone 500 mg IM and test of cure at day 10 is positive. What should I do now?

Test of Cure Recommendation: Why?

Ref	Case History	CRO MIC	AZM MIC	CRO Regimen Failed	Cured Regimen	Country & Year	Travel
1	FC248 clone; Woman vaginal & rectal infxn	1.0	0.5	1. CRO 1g; 2. 240 gentamicin & 2g AZM	Ertapenem 1g x 3d	UK 2018	Ibiza
2	Pharyngeal GC (MSW)	0.25	1	500mg CRO & 1g AZM	1g CRO & 2g AZM	UK 2016	Japan
3	Pharyngeal GC (MSW)	0.5	>256	1. CRO 1g & doxy x 7 d 2. Spectino 2g	Ertapenem 1g x 3d	UK 2018	Thailand
4, 5	3 pharyngeal GC	0.03	NA	500mg CRO		Australia 2013	?
6	3 pharyngeal GC	0.064 – 0.125	NA	500mg CRO		Sweden 2013	?

1. Eyre DW et al Euro Surv, March 2019
2. Fifer H et al, NEJM, 2016
3. Eyre DW et al Euro Surv, 2018
4. Chen MY et al JAC 2013,
5. Read PJ et al Sexual Health 2013
6. Golparian D et al, Euro Surv, 2014

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Test of Cure Recommendation: Time frame?

MAJOR ARTICLE

IDSA Infectious Diseases Society of America | nivmd hiv medicine association | OXFORD

Test of Cure for Anogenital Gonorrhoea Using Modern RNA-Based and DNA-Based Nucleic Acid Amplification Tests: A Prospective Cohort Study

Carolien M. Wind,[1,2] Maarten F. Schim van der Loeff,[3,4] Magnus Unemo,[5] Rob Schuurman,[6] Alje P. van Dam,[7,8] and Henry J. C. de Vries[1,2,4]

Time to clearance
- RNA NAAT: > 7 days
- DNA NAAT: > 9 days

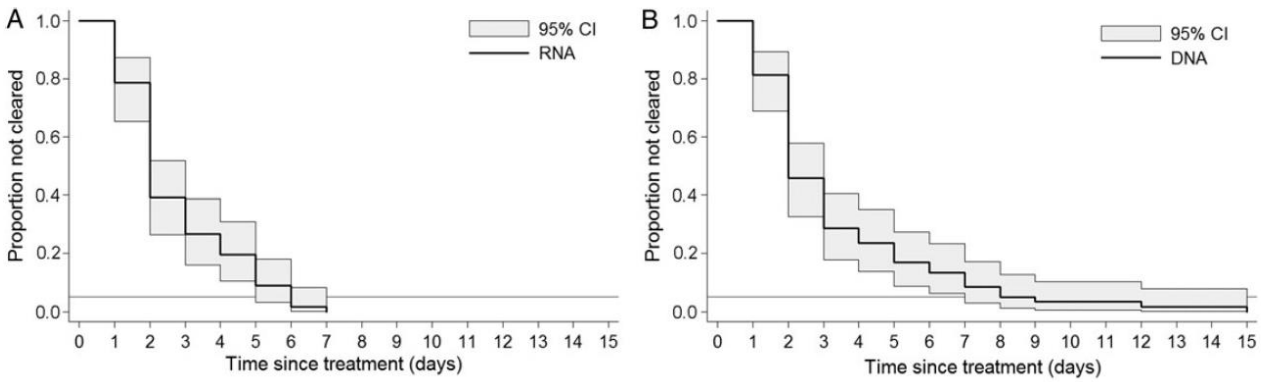

Figure 1. Time to clearance of *Neisseria gonorrhoeae* RNA (*A*) and DNA (*B*), with 95% confidence interval (CI). The horizontal line represents 95% clearance.

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Positive Pharyngeal Test of Cure at 7-14 days

- Rule out reinfection, ensure partner(s) treated
  - If reinfection likely, repeat treatment
- Retest with culture and NAAT at 14-21 days
- If culture not available and NAAT again positive, retreat with ceftriaxone 500 mg IM (or 1 gm if weight > 150 kg)

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What if my patient with pharyngeal GC has anaphylaxis with cephalosporins?

2010 Gonorrhea Treatment Guidelines

Uncomplicat… … Infection of Ce… …ra, or Rectum
ALTER… …EVERE CEPHALOSP… …ERGY)

NOTES:

- Must have test of cure in 1… …y, but may use NAAT
- If treatment failure, need cultu… …ealth

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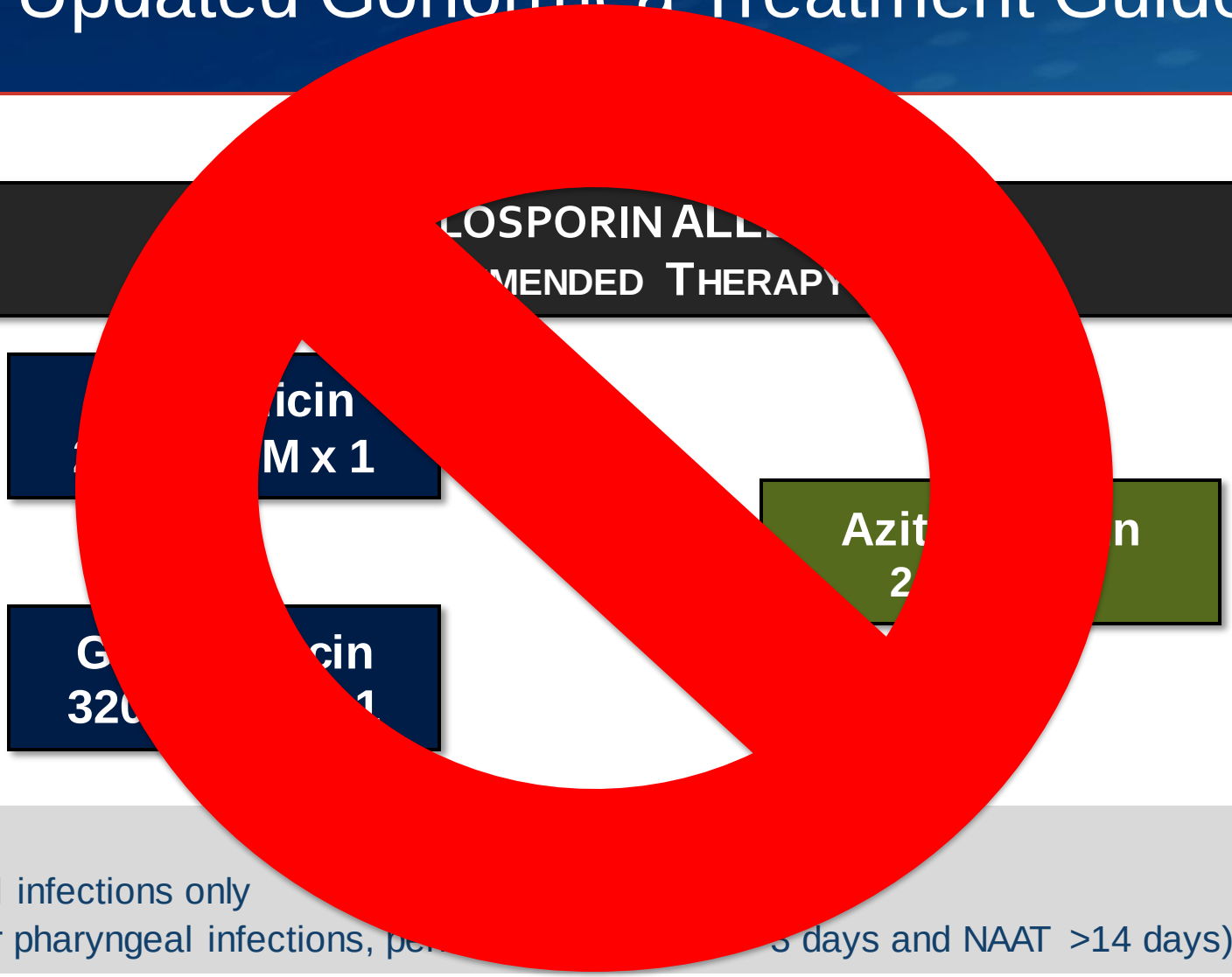
2015 Updated Gonorrhea Treatment Guidelines



NOTES:

- Urogenital infections only
- If used for pharyngeal infections, pe 3 days and NAAT >14 days).

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2020 Updated Gonorrhea Treatment Guidelines

CEPHALOSPORIN ALLERGY
RECOMMENDED THERAPY

Gentamicin
240 mg IM x 1

+

Azithromycin
2 g PO x 1

NOTES:
- Urogenital infections only

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Management of pharyngeal GC in the setting of anaphylactic ceftriaxone allergy

- No alternate options provided by CDC; they say “consult ID”
- Get as much information about the reaction as possible
- Possible options:
  - Get a culture if possible before treating
  - Give azithromycin 2 gm PO with or without gentamicin 240 mg IM
  - Test of cure at 2-4 weeks, ideally with NAAT and culture
  - If the GC is resistant to azithromycin and/or the GC persists at that time, modify treatment based on culture result
- Consider referral to Allergy for skin testing for future management

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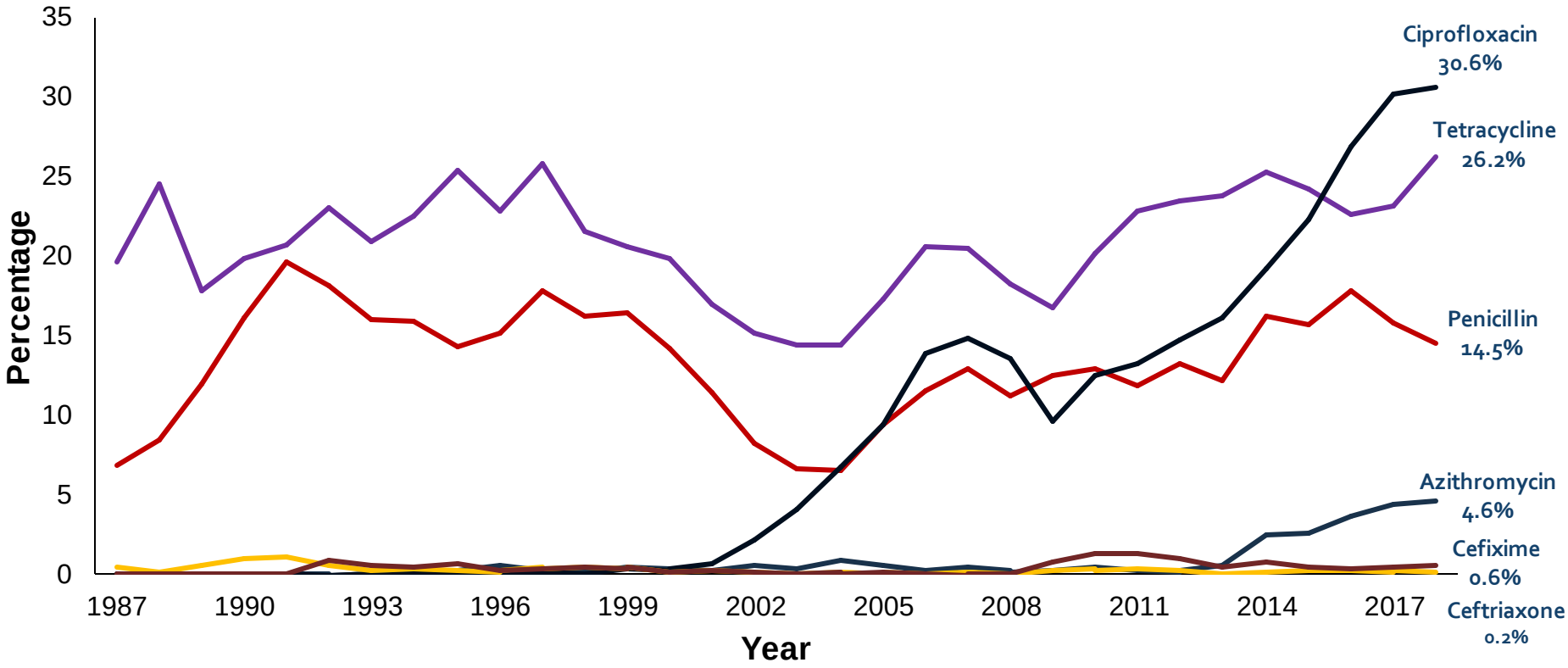
Prevalence of Tetracycline, Penicillin, or Fluoroquinolone Resistance or Elevated Cefixime, Ceftriaxone or Azithromycin MIC, by Year — GISP, 1987–2018*



*2018 data are preliminary as of 5/22/2019 and report data collected during Jan-July, 2018.

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Do I need to do a test of cure if I treat genital or anorectal GC with gentamicin?

When is a test of cure needed?

- Pharyngeal GC regardless of regimen at 7-14 days
  - Many experts would prefer 14-21 days
- Pregnant individuals
  - Mentioned in 2015 guidelines for CT but not GC
- Anyone with GC or CT should be retested at 3 months
  - For reinfection, not TOC

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32 yo MSW with positive urine NAAT for GC. What is recommended for partner therapy? Would it matter if the patient were MSM?

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Expedited Partner Therapy (EPT) or Patient-delivered partner therapy (PDPT)

- Appropriate for heterosexual patients with GC/CT whose partners' treatment cannot be ensured or is unlikely
  - Not appropriate for syphilis, maybe trichomonas
- Partners in the past 60 days
  - Or if no sex for >60 days, attempt to treat most recent partner(s)
- Legal in most states
- Not considered ideal for MSM
  - Concern for missing HIV and syphilis
  - **BUT CDC EXPECTED TO BE MORE PERMISSIVE ABOUT EPT IN MSM IN 2021**

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Expedited Partner Therapy (EPT) Big Changes

- Partners should be highly encouraged to present for testing and treatment
- BUT if partners will not or cannot:

Empiric treatment for exposure to GC and CT:
cefixime 800 mg PO x 1 AND doxycycline 100 mg PO x 7 days

EPT for exposure to GC alone:
cefixime 800 mg PO x 1

EPT for exposure to CT alone:
doxycycline 100 mg PO x 7 days

- Doxycycline has not been well-studied for EPT and if any concern about partner's adherence or possible pregnancy, azithromycin 1 gm po acceptable

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What?! You just talked about the need for ceftriaxone

- GC isolates with reduced susceptibility to cephalosporins remain exceedingly uncommon in women and MSW
  - Antimicrobial resistant GC – risk primarily in MSM
  - At least for now…we'll keep monitoring
- Reinfection in persons with previously diagnosed gonorrhea is high
  - Strongest risk factor for acquisition is past history
- Health department does not contact all partners (varies by jurisdiction)
- EPT is the key strategy in GC control among women and MSW

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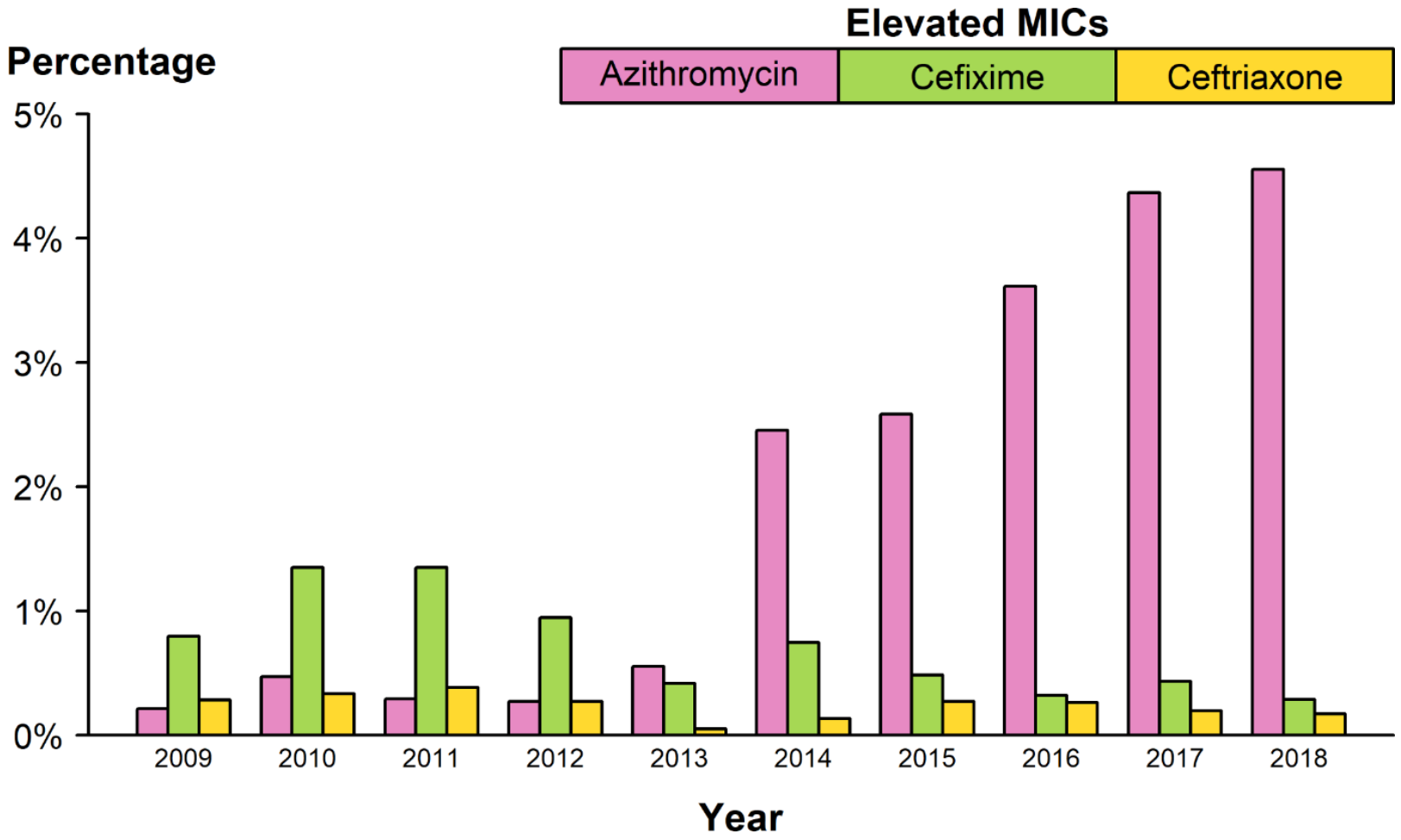
Neisseria gonorrhoeae — Percentage of Isolates with Elevated Minimum Inhibitory Concentrations (MICs) to Azithromycin, Cefixime, and Ceftriaxone, Gonococcal Isolate Surveillance Project (GISP), 2009–2018



NOTE: Elevated MIC = Azithromycin: ≥ 2.0 µg/mL; Cefixime: ≥ 0.25 µg/mL; Ceftriaxone: ≥ 0.125 µg/mL.

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28 yo MSM comes to clinic and says he was told by a partner he was exposed to "an STD but I don't know which one." You order 3 site GC/CT testing and treat with ceftriaxone 500 mg IM and doxycycline 100 mg po bid x 7 days. His CT testing comes back negative at all sites. Can you stop the doxycycline?

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If CT negative, can you discontinue doxycycline?

- Ensure all exposed anatomic sites tested and negative
- If so, you can discontinue the doxycycline
- Doxycycline is no longer considered part of the treatment for GC
- Practically, if CT not ruled out, you can start doxy until test results return or give a prescription and wait for the results
  - Do not recommend just waiting for the results

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Thank You

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